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The Prospects for Consolidation in China's Steel Industry

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The steel industry has played a major role in China's economic development ever since the founding of the People's Republic. It was considered to be the country's single most important industry during the Great Leap Forward of the 1950's, the one that would allow China to "overtake Britain and catch America". During the Third Front of the 1960's, Mao had steel mills built across China's inland provinces so that they would be self-sufficient in case of an invasion by an outside power. Ever since then, steel production has been ubiquitous in China, and the Party has worked actively to maintain control over this "pillar industry".

This was not difficult for it to do during the two decades following Reform and Opening because the government retained a system in which state-owned enterprises monopolized strategic industries like steel. However, when this system was dismantled in 1998, the Party began to lose its grip on the steel industry. Small mills started to spring up across China, responding to a growing domestic demand for basic materials.

This growth in demand snowballed as the country began to modernize its cities and build out its infrastructure. By 2004, the Chinese were consuming enough steel every month to build a city the size of Houston from scratch (Economist, 2008). This explosion in demand completely changed the dynamics of China's steel sector; it drove an expansion of supply that fragmented the steel industry and took control over steel production out of the hands of the government and placed it the hands of thousands of independent Chinese entrepreneurs.

THE EXPANSION OF CHINA'S STEEL INDUSTRY

In most countries, the steel industry has extremely high fixed costs, which tend to keep small players from entering the market; however, in China, barriers to entry are exceptionally low. Land is relatively inexpensive because local governments who want to secure the jobs and tax revenues that come from having steel producers in their jurisdictions are willing to offer it at a steep discount. Building a steel mill is relatively inexpensive in China because labor is cheap and construction time is short. Thus, when Chinese steel firms' profit margins increased almost six-fold between 1998 and 2002, there was an accompanying boom in the number of firms producing steel (see table 1).

Table 1: Profit Margins (on an EBT basis) and Number of Firms in China's Iron and Steel Industry

	1998	2002	2006
Profit Margin (%)	0.8	4.6	5.2
Number of Firms	1,078	3,551	6,959

Sources: (Rosen and Houser, 2007), (Brizendine and Oliver, 2001)

This expansion was done largely outside the view of the central government. Most of the upstart mills were built without the required permits because local governments allowed entrepreneurs to bypass the approval process. They also shielded them from any environmental regulations that might drive up their costs. Unfortunately, most of the entrepreneurs who entered the market had little or no experience in the steel industry. They built small, energy-intensive mills, and were not able to attract the technicians that they needed to run them efficiently (Lague, 2005).

This rapid buildout has fragmented the Chinese steel industry. Whereas the country's 10 biggest steelmakers accounted for almost 50% of China's steel production in 2002, they now account for less than 33% (Oster, 2006; Zhang and Zhang, 2009). The steel industry in China is currently dominated by companies who do not have the scale or the capital that they need to improve their production processes. As a result, many of these firms use completely outmoded technology. According to one industry consultant, "about one fifth of China's 500 million ton steel facilities are out-of-date" (Zhang, 2009a).

THE CONSEQUENCES OF BLIND EXPANSION

The steel industry's expansion is doing significant damage to China's environment. The small, inefficient mills that now produce a large percentage of the country's steel burn huge amounts of coal to drive their blast furnaces and pay little attention to the environmental impact of their production. In China, pollutants like nitrogen dioxide and mercury are basically unregulated, and even when there is environmental regulation in place, "enforcement generally falls to the provincial and local governments, which must balance environmental concerns against economic growth priorities" (Rosen and Houser, 2007). Under this system, small steel mills often end up wasting lots of energy and releasing large amounts of pollutants.

To make matters worse, China's steel industry has recently been pumping out more steel than the country needs (Deforche et al., 2007). Since 2004, it has flooded the world market with steel, driving down global prices and drawing fierce criticism from steelmakers worldwide. Some governments are beginning to take action, claiming that China's excess capacity is a result of government intervention in the steel industry. The US, for one, recently imposed import duties on Chinese steel pipe (O'Connor, 2009).

While these issues are certainly significant, Beijing is probably even more concerned by the way that the steel industry's fragmentation has driven up iron ore prices. Iron ore is not traded as a normal commodity. Instead, its price is determined every year through a "benchmark system", in which the three global iron ore miners meet with representatives from the main regional steel producers to hash out a price at which the ore will be sold for the upcoming year. The system was designed 40 years ago to give miners and steelmakers a reliable price that they could use to plan out their budgets.

China has been leading the steelmakers' side since 2005, and it has had a very difficult time negotiating for a good price. This is because the three mining firms are able to use a "divide and conquer" strategy, in which they offer an attractive benchmark price to smaller Chinese steelmakers who are not part of the official negotiations (Cai, 2009). This dramatically weakens the Chinese bargaining position and allows the miners to demand a much higher benchmark price.

Beijing has tried to prevent these side deals; however, it has proven to be very difficult. The small firms that the miners target generally lack import permits and are thus forced to buy their iron ore from large, State-owned mills with import licenses or on the spot market, where prices can be almost double the benchmark price (Cai, 2009). This profit motive practically guarantees

that the small steelmakers will find a way to buy ore from the mining companies if the miners are willing to sell it to them.

The mining companies know this, and they take full advantage of the situation, using it as leverage to drive up the price of iron ore. China has tried everything in its power to strengthen its bargaining position. It has pleaded with the miners, walked away from the negotiations, and even arrested one mining company's employees. But none of its antics have worked; the miners remain in full control of the negotiations.

China is acutely aware of the losses it has suffered due to its weak bargaining position. Last year, Beijing accused Rio Tinto, one of the three mining firms, of overcharging it by 102.5 billion USD over the course of 6 years. While this figure is rather overblown, given the fact that Rio made less than 55 billion USD in revenues from all of its iron ore sales over the last 6 years, it is an indication of how much the Chinese feel their weak bargaining position has lost them (Economist, 2009a).

BEIJING'S ATTEMPTS AT CONSOLIDATION

In order to address these issues, Beijing has vowed to consolidate the steel sector. In mid-2005, it released a set of "Development Policies for the Iron and Steel Industry". These policies state the central government's intention to consolidate the steel sector so that by 2010, its top 10 producers will account for more than 50% of domestic production, and by 2020, they will account for more than 70%. Of these ten companies, it wants two with production capacities of 30 million tons and several others with capacities of 10 million tons (Xinzhen, 2009a). By consolidating the industry, Beijing hopes to raise the steel sector's energy efficiency and lower its emissions; reduce its output and eliminate excess capacity; and improve the industry's technological capabilities so that steelmakers can innovate autonomously (Xinzhen, 2009a).

The central government gave further guidance on how it wants to attain these goals in another directive, "Adjustments and Revitalization Planning for the Iron and Steel Industry". This document specifies which firms Beijing has chosen to lead the consolidation (Baosteel, Anben, and Wugang) and gives guidance on how these and several other large Chinese firms should merge and restructure (KPMG, 2009). It also describes how the financial sector should act to support these policies. "Adjustments and Revitalization Planning for the Iron and Steel Industry" directs banks to be selective in their financial support by offering their services only to leading steel enterprises. It further instructs them to support these enterprises in all their financing needs, "subsidizing loan interests, where necessary" (KPMG, 2009).

Table 2: Selected Mergers and Acquisitions in China's Iron and Steel Industry (2005-2009)

Group Name	M&A's	Year
Baosteel Iron & Steel Group	1. Acquired Xinjiang Bayi Iron & Steel	1. 2007
	2. Restructured Guangzhou Iron & Steel Group and Shaoguan Iron & Steel Group to form Guangdong Iron &	2. 2008

	Steel Group 3. Restructured Ningbo Iron & Steel Co.	3. 2009
Anben Group	1. Formed by merger between Anshan Iron & Steel Group and Benxi Iron & Steel Group 2. Joint venture with Linggang to form new base 3. Equity participation in Tiantie Group 4. Acquired Pangang	1. 2006 2. 2007 3. 2008 4. 2009
Wugang Group	1. Restructured Ergang 2. Restructured Kungang 3. Restructured Liugang to form Guangxi Iron & Steel Group	1. 2005 2. 2007 3. 2008
Hebei Iron & Steel Group	Founded as a joint venture between Tanggang Group and Hangang Group	2008
Shandong Iron & Steel Group	Founded as a joint venture between Jinan Iron & Steel Group, Laiwu Iron & Steel Group	2008

Sources: (KPMG, 2009), (Xinzhen, 2009b), (Zhang, 2009b)

THE FORCES DRIVING FRAGMENTATION

While there has been quite a bit of merger activity since the central government put out these directives (see table 2), the industry has actually fragmented even further. Indeed, the market share of the top ten steel producers in the country dropped from 39% in 2005 to 37% in 2007 to less than 33% in 2009 (Brandt and Rawski, 2008; Zhao and Zhang, 2008; Zhang and Zhang, 2009). This increased fragmentation is largely due to the fact that steelmakers generally provide jobs and high levels of tax revenues. Thus, local governments with steel mills in their jurisdictions work actively to protect them and local governments without steel mills in their jurisdictions work actively to get them.

The issue of jobs is especially important to local governments in the poorer provinces of China's interior. Many of these regions do not have well-developed economies, so if a larger steelmaker were to acquire a mill in one of these areas and restructure it or even close it down, the workers who got laid off would have few if any other opportunities for employment. As a result, governments in the interior tend to be especially protective of their steel mills. Unfortunately, the interior provinces are exactly where the central government would like to see closures, because they tend to have the most inefficient, highly-polluting mills.

The other, more significant factor driving local governments to protect their steel mills are the tax revenues that they bring in. A local government is entitled to a quarter of the 17% value-

added tax (VAT) levied on all products made by the steel factories in its jurisdiction (Perkowski, 2008). This system acts as a powerful incentive for local governments to protect their steel mills from acquisition by any company outside their jurisdiction. Every government knows that if an outside firm restructures or closes its factory, it will receive much lower tax revenues. In other words, the threat of acquisition by an outside firm is a threat to the local government's bottom line.

M&A, CHINESE STYLE

Because local governments can easily block a cross-border merger if they feel that it is not in their best interests, large steelmakers have not been able to rapidly expand through mergers and acquisitions. Baosteel, one of China's largest and most powerful steel companies, has been blocked from acquiring numerous local steel mills (Zhao and Zhang, 2008). Its failed attempt to acquire Maanshan Iron & Steel Co. provides an excellent case study.

Maanshan is a large, publicly traded steel producer with very tight ties to Anhui's provincial government. It is located near plentiful iron ore reserves, so the government collects tax revenues from iron ore mining and processing as well as steel production. When Baosteel tried to take a majority stake in Maanshan, the Anhui provincial government stepped in because it knew that it would lose a large portion of its tax revenues if its steel company was taken over by a Shanghai-based firm. The government was able to block Baosteel from merging with Maanshan by pushing through local stimulus plans to expand Maanshan's production and putting in place several "buy-local" policies (Economist, 2009b).

These sorts of issues also tend to arise when there are mergers between steelmakers that are owned by different levels of government. While these problems don't always block a deal from going through, questions about property rights, personnel management, and lines of authority and taxation create conflicts of interest that tend to hinder or even prevent integration after the merger (Zhang, 2009b). The history of the Anben Steel Group is a perfect example of how conflicting interests between different levels of government can undermine a merger.

In 2006, Anshan Iron & Steel merged with Benxi Iron & Steel to form the Anben Iron & Steel Group. It seemed like an excellent match, given that both companies were located in the same province and thus wouldn't be plagued by many of the issues that usually bedevil cross-border mergers. Unfortunately, Anshan was owned by the central government while Benxi was owned by the Liaoning provincial government, and after the merger, both companies retained their allegiances to their original owners. The companies failed to integrate and have maintained separate operations ever since the merger (China Economic Review, 2009). One wonders how Beijing expects Anben Iron & Steel Group to lead the consolidation of China's steel industry when the two companies that make it up haven't even been able to integrate themselves.

Anben is not the only steelmaker in China that is a single firm in name only. Ironically enough, local governments have started to use nominal mergers as protectionist mechanisms by which they can prevent other large firms from acquiring their steel mills. They simply encourage their small mills to "merge" into a larger group, which allows those mills to claim that they are supporting Beijing in its goals of industry consolidation without actually having to change their

operations. This strategy has the added advantage of giving small mills access to bank loans that they might not have been able to get as a stand-alone firm (China Economic Review, 2009). These mergers in-name-only may very well account for a large portion of the mergers that are currently going on in China's steel industry, which does not bode well for the central government's efforts to consolidate the industry.

RECENT DEVELOPMENTS

At the beginning of this year, the prospects for consolidation of the steel industry were better than they had been in almost a decade. The financial crisis and the accompanying economic crisis had pushed down the world price of steel, driving most of China's steelmakers into the red. In December 2008, China's Iron and Steel Association reported that 62% of the country's large and medium-sized steel producers had losses totaling 29.1 billion yuan (Yu, 2009). Small companies with small margins were suffering serious losses, and some even started seeking out larger companies to acquire them (Jiang, 2009). Analysts and government officials predicted that the smaller mills would not be able to hold out for long. China's steel industry would finally have to consolidate.

China's recent 4 trillion yuan stimulus package has changed all that. By focusing its spending on infrastructure investment, Beijing has stimulated China's domestic demand for steel, driving up prices and pulling small steel firms back from bankruptcy. By July 2009, monthly profits of Chinese steel mills were expected to top 20 billion yuan (Zhang, 2009). Ironically, the stimulus may end up favoring the smaller firms that Beijing has been trying to get rid of since infrastructure projects generally require the low-quality steel that they specialize in making (Waldmeir, 2008). While the stimulus will not hold up prices forever, it has restored smaller firms' confidence in the steel market, which will likely work against consolidation in the short-to-medium term.

Having removed the economic incentives for the smaller firms to consolidate themselves, Beijing is trying to find ways to allow larger firms to come in and take them over. It knows the only way this will happen is if it can break the bonds that tie the local governments financially to the mills in their jurisdictions. Thus, the central government is trying to restructure the tax code so that mergers and acquisitions by outside firms are not automatically seen as a threat to local governments' bottom lines.

Its current plan is to redirect some of the money that steelmakers pay in national taxes to local governments with the hopes that those increased revenues will make them more amenable to letting go of their mills (Matthews, 2009). This new system will certainly begin to delink steel firms from local governments' finances; however, its effectiveness will depend on how the money is allocated. If the local governments that will suffer as a result of future mergers know that they will not get a portion of the new tax revenues, they will certainly continue to protect their steel mills. Assuring that the money goes to the governments that are actually being affected will be very difficult if not impossible for the central government to achieve in practice.

THE PROSPECTS FOR CONSOLIDATION

Beijing's desire to consolidate the steel industry is certainly understandable. It would raise the sector's energy efficiency and lower its emissions; reduce steel output and eliminate excess capacity; and improve the industry's technological capabilities so that Chinese steelmakers could innovate autonomously. However, the only time that the central government is able to implement its policies effectively to accomplish its goals is when its interests and the interests of China's local governments are in line. Unfortunately, when it comes to consolidation of the steel industry, their interests seem to be diametrically opposed.

Therefore, the central government must find ways to align the local governments' interests with its own. This will be difficult, but until it happens, Beijing will face resistance at every turn. As long as provincial, municipal, and township governments are determined to protect their steel mills, they will prevent real mergers and acquisitions from taking place, and the central government will not be able to achieve its goals.

In short, Beijing's success will depend wholly on whether it can restructure the system to align the local governments' interests with its own. Given the difficulty of this task, the prospects for consolidation of the Chinese steel industry do not look very good, at least not in the short-run.

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